Bohannon Creek

Water Quality Concerns

IDEQ data shows subsurface fine sediments <1/4" at 30% on Bohannon Creek which is above desired levels of <25%. BLM lands cross two reaches identified as having problems. Three roads on BLM have been identified as sources of sediment, the West Fork Wimpey Creek Road, and the four-wheel drive trails up the East Fork and main Bohannon Creeks.

Data Gathering Results

Fish Surveys

The Idaho Department of Fish and Game (IDFG) electroshocked the mainstem and East Fork of Bohannon Creek in the summer of 2000. On mainstem Bohannon, 39 fish of multiple year classes and several species were captured in three reaches. On the East Fork of Bohannon, six fish of multiple year classes and two species were captured in three reaches.

Streambank Stability

In 2001, the BLM surveyed bank stability on the sections of the East Fork and Lower Bohannon Reaches crossing BLM land. Results are listed in Table 3 and shown in Figure 2.

Table 3. Bohannon Creek bank erosion required reductions on BLM and bank stability survey results.

Site	Required Reduction in Erosion Rates	BLM Surveyed Percentage Stable Bank
E. Fork Reach	58%	80%
Lower Reach	88%	76%

The TMDL called for a 58% reduction in bank erosion rates on the East Fork Reach. The BLM's survey found 80% stable banks in this reach; therefore, BLM lands along the East Fork are at naturally stable conditions. Overall, this reach is characterized by a mature overstory of cottonwoods, alders, and aspen with younger willow, aspen, and alder shoots. Much of this reach is located in a deep canyon created by downcutting related to historic mining and is inaccessible to cattle. Bank erosion in this canyon has been accelerated in the past with runoff from flood irrigation on private lands above; however, the source of this runoff has been eliminated with the landowner's change to a sprinkler system. Areas accessible to cattle show some evidence of bank trampling with a vegetative cover of mainly of upland species. The uppermost section is a large gravel bar complex. BLM lands along the listed East Fork Reach are currently fenced in with private land.

The TMDL called for a 88% reduction in bank erosion rates along the lower reach. BLM's survey found 76% stable banks on BLM land in this reach, indicating banks are slightly less stable than estimated natural conditions. Most of the unstable banks managed by BLM in this reach are located in a water gap for the McMurdie pasture, Wimpey Coal Mine Allotment. This reach has an overstory of mature cottonwoods and other riparian trees.

Completed Project Implementation

In 2000, maintenance work on the West Fork Wimpey Creek Road included cleaning cattleguards, surfacing approximately 1/4 mile with gravel, and installing a culvert for sediment reduction and improved drainage. In addition, discussions were initiated with the private land owner for a prescribed burn to improve the water balance on the forest/sagebrush edge.

During the 2001 season, improvements were made on the East Fork Bohannon Road/Trail. Waterbars and ditches were maintained on approximately ½ mile of road to improve drainage and reduce the distance that water flows down the road. This will improve the road condition but have no impact on water quality because drainage off the road does not reach the stream. The headwaters of the East Fork of Bohannon Creek are not impacted by this road, nor is any other portion of the stream, due to the distance of the road from the stream and the cobble-sized rocks on the road surface.

2002 Implementation Plan

Remaining Data Needs

The BLM will continue monitoring water temperature monitoring on Bohannon Creek. In addition, sediment production from the West Fork Wimpey Creek Road, East Fork Road/Trail, and the Bohannon Road/Trail may be modeled and evaluated; however, discussion with USFS research station employees in 2001 showed that given the soil type and road surface, limited information would be attained through modeling. The BLM will consider the benefits of conducting this modeling in the future. The BLM will evaluate ways to improve bank stability on the Lower Reach, especially in areas impacted by the watergap. Finally, McNeal core samples will be taken following Salmon Challis National Forest protocols at the BURP monitoring site located 200 meters below the West Fork Wimpey Creek Road (NE1/4, NE1/4, Sec 22).

Remaining Project Implementation

An exclosure fence is planned at the BLM/private boundary on the mainstem of Bohannon Creek to keep cattle off of an impacted section of stream and allow for improved bank stability. Work will continue as necessary to improve drainage off roads and trails, implementing Best Management Practices, and control weeds in the drainage.

Figure 2. Bohannon Creek Drainage